

STUDIES OF AMERICAN SPERMATOPHYTES—III*

PLANTS OF TEXAS, CHIAPAS, AND BRITISH HONDURAS

AS a co-operative project between the University of Michigan Herbarium and Southern Methodist University, a long term botanical survey of Texas was inaugurated in 1941. Field studies undertaken in Texas in 1940 were continued in 1941 and 1942. From Texas three new species in the genera *Xylosma*, *Bumelia*, and *Citharexylum*, two subspecies and two varieties of *Phlox*, and an albino form of *Leucophyllum frutescens* (Berl.) Johnston are described. Included also are a new genus, *Belicea* of the Rubiaceae, discovered by Percy H. Gentle in southern British Honduras, and six new species from Chiapas and British Honduras in the genera *Colubrina*, *Aegiphila*, *Hyptis*, *Solanum*, and *Belicea*.

The writer is indebted to the Faculty Research Fund of the University of Michigan for support in part of the Texas survey in 1940 and 1942.

Colubrina mollis Lundell, sp. nov.—Arbor parva; ramulis pubescentibus. Folia petiolata, petiolo 0.8–1.5 cm. longo, lamina membranacea, ovato-oblonga vel ovato-elliptica, 8.5–16 cm. longa, 4.3–8 cm. lata, apice acuminata, basi rotundata vel subcordata et abrupte acuta, remote dentato-serrata, supra glabrata, subtus pilosa, 3-nervia. Flores axillares, pedicellis 1.5–3.5 mm. longis. Calyx 5-lobatus, lobis 1.7–2 mm. longis. Petala 5, glabra. Stamina 5.

An unarmed tree, 12 to 15 m. high, 40 cm. in diameter; branchlets slender, straight, densely pubescent with pale reddish brown hairs. Petioles pubescent, slender, 0.8 to 1.5 cm. long. Leaf blades membranaceous, ovate-oblong or ovate-elliptic, 8.5 to 16 cm. long, 4.3 to 8 cm. wide, apex acuminate, base rounded or subcordate and abruptly acute, the acute base triangular, paler beneath, margin coarsely and remotely dentate-serrate, the teeth rounded,

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at first densely pubescent on both surfaces, upper surface glabrous with age except along the veins, lower surface persistently and densely soft pilose or subtomentose, 3-nerved at base, the veins impressed above, conspicuous beneath. Flowers numerous, fasciculate in the leaf axils or borne in dense subsessile cymes, pubescent. Pedicels slender, 1.5 to 3.5 mm. long. Calyx 5-lobed, the lobes triangular-ovate, 1.7 to 2 mm. long, glabrous within. Petals glabrous, cucullate, subequaling calyx lobes. Stamens 5. Disk flat.

MEXICO: Chiapas, between Mazapa and Motozintla, altitude 1200 m., in advanced forest, July 19, 1941, *Eizi Matuda 4873* (type in the University of Michigan Herbarium).

The large thin leaves and persistent soft pubescence of the undersurface of the blade are characteristics by which *C. mollis* may be readily separated from *C. glomerata* (Benth.) Hemsl., the species to which it apparently has affinity.

Xylosma blepharodes Lundell, sp. nov.—Frutex; ramulis novellis puberulis. Folia petiolata, fasciculati, chartacea vel subcoriacea, oblanceolata, elliptica, vel ovato-elliptica, 1–5.5 cm. longa, 0.5–2.2 cm. lata, apice obtusa, basi cuneata, crenulato-serrulata. Flores fasciculati. Pedicelli fructiferi ad 6 mm. longi. Sepala 5, ciliata. Bacca subglobosa, ad 6 mm. diam.

Slender spiny shrub, about 2 m. high; branchlets slender, at first densely puberulent; spines slender, straight, up to 3.5 cm. long. Leaves alternate, usually clustered on short spurlike branchlets of older wood; petioles 0.5 to 2.5 mm. long, puberulent above. Leaf blades chartaceous to subcoriaceous, green, only slightly paler beneath, oblanceolate, elliptic, or ovate-elliptic, 1 to 5.5 cm. long, 0.5 to 2.2 cm. wide, apex obtuse or rounded, base attenuate-cuneate to broadly cuneate, margin crenulate-serrulate, the teeth rather remote, irregular and obtuse, puberulent above along the costa, glabrous otherwise, primary veins 5 or 6 on each side, slender, evident on both surfaces, reticulation inconspicuous. Flowers fasciculate. Pedicels slender, glabrous, jointed at base, up to 4 mm. long in fruit, usually short, the fruits sometimes subsessile. Sepals 5, unequal, ovate-oblong, 0.6 to 1.4 mm. long, acute, pubescent, conspicuously ciliate with stiff hairs. Fruits

subglobose, up to 6 mm. in diameter, glabrous; styles persistent, almost 1 mm. long.

TEXAS: Cameron County, in Palm Grove, south of Brownsville, April 6, 1941, *C. L. Lundell and Amelia A. Lundell 10000* (type in the University of Michigan Herbarium, duplicate in the herbarium of Southern Methodist University).

Bumelia riograndis Lundell, sp. nov.—Frutex; ramulis glabratiss. Folia petiolata, petiolo 1.5–6 mm. longo, lamina chartacea, obovato-elliptica vel elliptica, 1.6–3.5 cm. longa, 1–1.8 cm. lata, apice rotundata, emarginata, basi cuneata. Flores fasciculati. Pedicelli ad 3 mm. longi. Sepala 5, 2–2.5 mm. longa. Corolla 3.5–4 mm. longa, glabra. Ovarium hirsutum.

Spiny shrub; branchlets reddish, short, nodose, glabrate, spine tipped. Leaves clustered on short spurlike branchlets of older wood; petioles slender, 1.5 to 6 mm. long, covered at first with loose hairs, glabrous with age. Leaf blades chartaceous, glabrous except for loose hairs along the midvein, obovate-elliptic or elliptic, 1.6 to 3.5 cm. long, 1 to 1.8 cm. wide, apex rounded, shallowly emarginate, cuneately narrowed at the base or acute, conspicuously but finely reticulate veined on both surfaces, the veins whitish, primary veins 7 or 8 on each side, costa plane above, elevated beneath. Flowers numerous, fasciculate. Pedicels slender, up to 3 mm. long, with a few loose hairs at anthesis. Calyx glabrescent; sepals 5, unequal, ovate-orbicular or depressed orbicular, 2 to 2.5 mm. long. Corolla glabrous, 3.5 to 4 mm. long, the lobes suborbicular, about 2.2 mm. long, minutely erose; appendages lanceolate, about 2 mm. long, acutish, erose. Staminodia petaloid, ovate, 2 mm. long, acutish. Ovary hairy. Style glabrous, about 1.5 mm. long.

TEXAS: Jim Hogg County, between Hebbronville and Rio Grande City, July, 1928, *B. C. Tharp s.n.* (type in the University of Michigan Herbarium).

Closely allied to *B. texana* Buckl.

PHLOX NIVALIS Lodd. subsp. **texensis** Lundell, subsp. nov.—Suffruticosa. Caules pubescentes, ad 45 cm. longi, dense foliati. Folia rigidula, lineari-subulata vel lineari-lanceolata, 2.5–30 mm.

longa, ad 3 mm. lata. Cymae 1-5-florae. Pedicelli 3-25 mm. longi. Calyx glandulosus, 6.5-9 mm. longus, lobis tubo aequilongis vel subaequilongis. Corolla glabra, lobis bifido-emarginatis. Stylus 1.5-2.5 mm. longus; ovarii loculi uniovulati vel biovulati. Semina ellipsoidea, 2.2 mm. longa, rugulosa.

Perennial, stems woody at base, trailing or decumbent, up to 45 cm. long, with numerous axillary latent shoots, often matted; flowering shoots lax, erect, up to 20 cm. long, pubescent, the hairs inconspicuously glandular. Leaves persistent, sessile, very dense on the latent shoots, linear-subulate and canaliculate or linear-lanceolate and essentially plane, 2.5 to 30 mm. long, usually acicular, rarely up to 3 mm. wide, apex spinescent, usually reflexed, the margin ciliate with stiff hairs. Cymes usually 3- to 5-flowered, sometimes reduced to 1 flower. Pedicels slender, glandular-pubescent, 3 to 25 mm. long. Calyx glandular-pubescent, 6.5 to 9 mm. long, the lobes equaling or subequaling the tube, spinescent. Corolla glabrous outside, variable in size and color, fragrant, pink, rose-pink, bluish, lavender, or purplish, the eye reddish or purplish; tube up to 15 mm. long, villous within at base; lobes usually 5, rarely 4, obovate or cuneately obovate, up to 12 mm. long, typically with a conspicuous sinus up to 2.5 mm. deep, rarely only erose and shallowly emarginate. Stamens usually 5, rarely 4, usually included, rarely with tips of anthers exerted from corolla tube. Ovary 3-celled, usually with 1 ovule in each cell, sometimes with 2 ovules in a cell; style short, 1.5 to 2.5 mm. long; stigma 3-lobed, 1 to 1.3 mm. long. Capsule glabrous; seed ellipsoid, 2.2 mm. long, rugulose.

TEXAS: Tyler County, south of Woodville, in rolling pine land, April 18, 1942, *C. L. Lundell and Amelia A. Lundell 11282* (type in the University of Michigan Herbarium, duplicate in the herbarium of Southern Methodist University); about 4 miles south of Woodville, in pine land, April 13, 1942, *Lundell and Lundell 11122, 11125, 11126*; about 5 miles north of Warren, in rolling pine land, April 18, 1942, *Lundell and Lundell 11278*; about 6 miles north of Warren, in rolling pine land, April 18, 1942, *Lundell and Lundell 11280*; south of Woodville, in rolling

pine land, April 18, 1942, *Lundell and Lundell 11284*, vernacular name, *moss phlox*.

The Texas plant, first called to the writer's attention by Edgar T. Wherry, is abundant in the pine lands off U. S. highway 69, between Woodville and Warren in Tyler County. Mr. and Mrs. G. M. Soxman of Dallas directed the author to this locality.

The subspecies may be distinguished immediately by the pronounced sinus of the corolla lobes. In the typical form of the species, the lobes are merely erose or inconspicuously emarginate. The glandular hairs of *P. nivalis texensis* are scarcely evident in dried material. Further, the leaves of the latent shoots apparently are more acicular and denser than in the usual form of the species.

PHLOX PILOSA L. subsp. **pulcherrima** Lundell, subsp. nov.—Perennis. Caulis erectus, ad 60 cm. altus, pubescentibus. Folia sessilia, linearia vel anguste lineari-lanceolata, ad 12.5 cm. longa, 2–6 mm. lata, ciliata. Flores in corymbis terminalibus, pedicellis 3–18 mm. longis. Calyx eglandulose villosus, lobis linearibus tubo longioribus. Corolla rosea, glabra. Stylus 1–1.3 mm. longus.

Perennial, erect, up to 60 cm. high, plants usually solitary; stems terete, pubescent with short eglandular recurved hairs, glabrescent, the latent shoots erect, shorter than the flowering shoots; internodes elongate above; nodes 7 to 10. Leaves opposite, sessile, chartaceous, linear or narrowly linear-lanceolate, up to 12.5 cm. long, 6 mm. wide, usually less than 3 mm. wide, attenuate to the spinescent apex, sparsely pubescent, glabrescent, persistently ciliate at base with coarse hairs, upper surface obscurely papillate, the midvein impressed. Cymes in terminal corymb; the inflorescence variable, open to compact, usually few-flowered, up to 15 cm. wide, 12 cm. high; foliaceous bracts spreading or reflexed, those at base lanceolate, slightly wider than the leaves. Pedicels often less than 5 mm. long, sometimes up to 18 mm. long, pubescent with short recurved eglandular hairs. Calyx up to 13 mm. long, the lobes longer than the tube, subulate or linear, conspicuously awn-tipped. Corolla variable in size, rose-pink with darker reddish eye; tube glabrous outside, up to 21

mm. long, short villous within at base; lobes glabrous, obovate, up to 16 mm. long, 15 mm. wide, apex apiculate or rounded. Upper stamens barely included; anthers oblong, up to 3 mm. long. Ovary with 1 ovule in each cell; style very short, 1 to 1.3 mm. long; stigma up to 2 mm. long.

TEXAS: Angelina County, east of Zavalla, off highway 63, in pine land, May 8, 1941, *C. L. Lundell and Amelia A. Lundell 10557*. Cherokee County, northwest of Rusk, off U. S. highway 69, in woodland, May 8, 1941, *Lundell and Lundell 10563*. Hardin County, about 2 miles southwest of Kountze, in pine land, April 14, 1942, *Lundell and Lundell 11153, 11154* (type in the University of Michigan Herbarium, duplicate in the herbarium of Southern Methodist University). Jasper County, northwest of Jasper, off highway 63, in pine land, May 8, 1941, *Lundell and Lundell 10553*. Polk County, east of Livingston, in pine land, April 18, 1942, *Lundell and Lundell 11287*. Sabine County, near Bronson, off U. S. highway 96, in pine land, May 7, 1941, *Lundell and Lundell 10505*; Brookeland, in pine land, May 7, 1941, *Lundell and Lundell 10508*. Tyler County, about 4 miles south of Woodville, in pine land, April 13, 1942, *Lundell and Lundell 11124*; northwest of Woodville, in pine land, April 13, 1942, *Lundell and Lundell 11164*; about 5 miles north of Warren, in rolling pine land, April 18, 1942, *Lundell and Lundell 11276*; south of Woodville, in rolling pine land, April 18, 1942, *Lundell and Lundell 11281*, flowers faintly fragrant. Walker County, east of Huntsville, in forest, April 18, 1942, *Lundell and Lundell 11295*.

The plant is currently passing as *Phlox pilosa* var. *amplexicaulis* (Raf.) Wherry. The true identity of *P. amplexicaulis* Raf. is very doubtful, for the description is so broad and inadequate that it could be interpreted to cover several species, as well as various southern forms of *P. pilosa*. To assign the name arbitrarily can serve no useful purpose. Brand referred it with doubt to *P. divaricata* L. (*Pflanzenreich* IV. 250: 72. 1907).

P. pilosa pulcherrima is one of the finest of the Texas phloxes. The beauty of its large rose-pink corollas is scarcely equaled by any other form. In Tyler County, evidently the center of distribution, it occurs throughout the pine lands.

The long straggly eglandular hairs of the calyx, the slender calyx lobes, the glabrous rose-pink corolla, the tall slender habit, the long linear leaves sparingly pubescent and persistently ciliate at base are the primary differentiating characteristics of the subspecies. The wide field observations indicate that there is a close correlation between the type of pubescence and corolla color.

PHLOX PILOSA PULCHERRIMA var. **typica** Lundell, var. nov.—Calyx eglandulose villosus. Corolla glabra.

The usual widespread form of the subspecies, typified by *Lundell and Lundell 11154*, has large glabrous corollas.

Another form, apparently uncommon, has pubescent corolla tubes; it may be known as follows:

PHLOX PILOSA PULCHERRIMA var. **pubiflora** Lundell, var. nov.—Calyx eglandulose villosus. Corollae tubus parce pubescens.

TEXAS: Cherokee County, northwest of Wells, off U. S. highway 69, in woodland, May 8, 1941, *C. L. Lundell and Amelia A. Lundell 10561*. Walker County, east of Huntsville, in forest, April, 18, 1942, *Lundell and Lundell 11472* (type in the University of Michigan Herbarium, duplicate in the herbarium of Southern Methodist University), perennial, corolla rose-pink, the tube short villous, eglandular.

Aegiphila wigandioides Lundell, sp. nov.—Arbor parva; ramulis cinereo-tomentosis. Folia petiolata, petiolo 1–1.4 cm. longo, lamina membranacea vel subchartacea, ovata vel lanceolata, 7–14 cm. longa, 4–7 cm. lata, apice attenuata, acuminata, basi rotundata, supra villosa, subtus cinereo-tomentosa. Cymae axillares et terminales, pedunculatae, cinereo-tomentosae. Calyx ca. 1.2 cm. longus, lobis 4. Corolla glabra. Stamina 4.

A tree, 7 meters high; branchlets terete, canescent-tomentose, becoming glabrate in age and reddish brown. Leaves decussate; petioles 1 to 1.4 cm. long, tomentose. Leaf blades membranaceous or subchartaceous, grayish green, paler beneath, ovate or lanceolate, 7 to 14 cm. long, 4 to 7 cm. wide, apex attenuate, acuminate, base rounded, margin entire, densely and persistently short villous above, the hairs multicellular and enlarged at base, canescent-

tomentose beneath, costa prominent on undersurface, primary veins conspicuous, 5 to 7 on each side. Cymes axillary and terminal, solitary in the axils, compactly flowered, canescent-tomentose; peduncles stout, up to 2.5 cm. long; bractlets filiform, villous. Pedicels slender, up to 2 mm. long, villous. Calyx obconic-campanulate, about 1.2 cm. long, 5 mm. wide, villous, 4-lobed, the lobes ovate-triangular, 2 to 3 mm. long, obtuse. Corolla glabrous, infundibular, the tube slender, 1.1 to 1.3 cm. long, ampliate above; lobes 4, elliptic or oblong-elliptic, up to 5.5 mm. long, 4 mm. wide, apex obtuse or rounded. Stamens 4, equal, exserted. Ovary glabrous; style filiform; stigma bifid.

MEXICO: Chiapas, Santa Rosa, near Escuintla, altitude 1600 m., in advanced forest, June 20, 1941, *Eizi Matuda 4253* (type in the University of Michigan Herbarium).

Apparently, the species is related to *A. Deppeana* Steud., but the denser persistent indument and large calyx amply distinguish it. The superficial resemblance to *Wigandia* of the Hydrophyllaceae is remarkable.

Citharexylum spathulatum Moldenke & Lundell, sp. nov.—Frutex, ramulis glabris. Folia chartacea, glabra, spathulata, 0.8–2.5 cm. longa, 2.5–5 mm. lata, apice rotundata, basi attenuata; petiolis nullis. Inflorescentiae 1- raro 2-florae, terminales. Calyx campanulatus, ca. 3.5 mm. longus. Corolla alba, 6 mm. longa. Stamina 4. Ovarium glabrum.

A shrub, 1 m. high, openly branched; branches and branchlets slender, glabrous; twigs usually sharp pointed, quadrangular or subterete, the youngest shoots short hirtellous at the nodes, essentially glabrous otherwise. Leaf scars small, short stalked; leaves opposite on young shoots, clustered on short spurlike branchlets of older wood; petioles none. Leaf blades green, chartaceous, entirely glabrous or with a few short stiff hairs at apex, spathulate, usually 0.8 to 2.5 cm. long, sometimes shorter, 2.5 to 5 mm. wide, apex usually rounded, sometimes shallowly emarginate, acutish, or apiculate, base attenuate and very slender, entire, midrib discernible but inconspicuous, veins not evident. Flowers fragrant, usually 1, rarely 2, terminating the very short spurlike

branchlets. Pedicels very short, densely white-hirtellous. Calyx campanulate, about 3.5 mm. long, contracted at base into stipe about 0.5 mm. long, usually 5- rarely 4-ribbed, the rim bearing 5 thick reflexed teeth, truncate or toothed between the primary teeth, sparsely short appressed-hirtellous, ciliolate. Corolla white, sparsely hairy, 6 mm. long; the tube about 3.5 mm. long; the lobes ovate, rounded at apex, ciliate; throat and upper half of tube densely barbate. Stamens 4, included; filaments hairy; staminode rudimentary, hairy. Ovary glabrous; style 1 mm. long, basal half stipitate-glandular. Fruits unknown.

TEXAS: Hidalgo County, 11 miles north of Mission, on sand in open scrub, April 4, 1941, *C. L. Lundell and Amelia A. Lundell 9953* (type in the University of Michigan Herbarium, duplicate in the herbarium of Southern Methodist University).

This is evidently the plant described as *Citharexylum brachyanthum* var. *glabrum* C. L. Hitchc. & Moldenke (Fedde, *Repert.*, 37: 218. 1934). The glabrous longer leaves, glabrous branchlets, and differences in the flowers indicate that a distinct species is represented.

In *C. spathulatum* the calyx rim bears 5 thick reflexed teeth terminating the ribs of the tube; between these primary teeth, the margin is truncate or shallowly toothed. The calyx rim is suggestive of the genus *Lycianthes* in the Solanaceae. In *C. brachyanthum* the calyx has 5 conspicuous teeth with well-developed sinuses between each. Further, the flowering calyx of *C. brachyanthum* is somewhat smaller, the ribs are less evident, and the pubescence is dense. The corolla of *C. brachyanthum* is a third smaller.

The interpretation of the flowers of *C. brachyanthum* is based upon *Forrest Shreve 8421* from Coahuila, Mexico.

Hyptis belizensis Lundell, sp. nov.—Herba erecta, ramulis novellis adpresse hirtellis. Folia petiolata, petiolo marginato, lamina subcoriacea, hirtella, anguste oblongo-lanceolata vel oblanceolata, 6–15 cm. longa, 0.7–1.7 cm. lata, apice acuta vel acuminata, basi attenuata, supra bullata. Inflorescentiae capitatae, axillares, pedunculatae. Pedunculi ad 3 cm. longi. Capitula ad 2.5 cm. diam. Calyx ad 1 cm. longus. Corolla alba, tubo ad 5 mm. longo.

An erect perennial herb, up to 90 cm. high, with woody root 5 cm. in diameter; stems quadrangular and densely appressed-hirtellous above, subterete and glabrous below, reddish brown. Petioles narrowly winged to base by the narrowly attenuate decurrent leaf blades, appressed-hirtellous. Leaf blades rigid, subcoriaceous, minutely hirtellous on both surfaces, narrowly oblong-lanceolate or oblanceolate, 6 to 15 cm. long (including petioles), 0.7 to 1.7 cm. wide, apex attenuate, acute or acuminate, base attenuate, decurrent to the stem, margin irregularly serrate, costa and veins impressed above, prominent beneath, the upper surface bullate. Peduncles solitary, axillary, appressed hirtellous, up to 3 cm. long. Flowers in globose echinate capitula up to 2.5 cm. in diameter, subtended by lanceolate acuminate spreading or reflexed bracts up to 11 mm. long. Calyx at maturity up to 1 cm. long, the erect stiff subulate teeth subequaling the tube, the indument persistent. Corolla white, pubescent, its tube up to 5 mm. long. Nutlets smooth.

BRITISH HONDURAS: Toledo District, Swasey Branch, Monkey River, edge of hammock in pine ridge, Jan. 28, 1942, *Percy H. Gentle 3896* (type in the University of Michigan Herbarium), flowers white, becoming reddish after four days.

H. belizensis, which is nearest *H. lanceolata* Poir., differs from that species in having very narrow leaf blades, persistent indument, and long subulate calyx teeth. The peculiarities of the British Honduran plant were first pointed out by Epling (*Carnegie Inst. Wash. Publ.*, 522: 242. 1940).

***Solanum Gentlei* Lundell, sp. nov.**—Arbor parva; ramulis albidostellato-tomentosis. Folia petiolata, petiolo ad 5 mm. longo, lamina membranacea, supra viridis, subtus albidostellato-tomentosa, oblongo-lanceolata, anguste elliptica, vel oblanceolata, 8–22 cm. longa, 3.5–7.7 cm. lata, apice subabrupte acuminate, basi acuta. Inflorescentiae terminales, albido-tomentosae, cymosocorymbosae, ad 6 cm. longae. Pedicelli ad 1 cm. longi. Calyx ca. 2.8 mm. longus. Corolla ca. 6 mm. longa, profunde lobata. Bacca globosa, glabra, ca. 6.5 mm. diam.

A small unarmed tree; branchlets slender, white tomentose

with fine stellate hairs. Leaves alternate, sometimes with a reduced opposite leaf; petioles short, canaliculate, tomentose, usually less than 5 mm. long, rarely up to 8 mm. long. Leaf blades membranaceous, dark green above and sparsely stellate pubescent, persistently white tomentose on undersurface with fine stellate hairs, the hairs sessile and stalked, oblong-lanceolate, narrowly elliptic, or oblanceolate, 8 to 22 cm. long, 3.5 to 7.7 cm. wide, apex subabruptly acuminate, base acute, often with subequal sides, margin entire, veins impressed above, conspicuous beneath, primary veins 5 or 6 on each side. Inflorescence terminal, white tomentose, cymose-corymbose, up to 6 cm. long, with peduncles up to 2.5 cm. long. Pedicels usually recurved, slender below, thickened above, up to 1 cm. long in fruit. Calyx white tomentose with fine stellate hairs, campanulate, about 2.8 mm. long, 5-lobed almost to the middle, the lobes apiculate, scarcely accrescent in fruit. Corolla about 6 mm. long, the lobes ovate-oblong, about 3.5 mm. long, acutish, finely stellate-tomentose outside, glabrous within. Anthers blunt. Ovary white tomentose above. Fruits globose, glabrescent, about 6.5 mm. in diameter.

BRITISH HONDURAS: Toledo District, Swasey Branch, Monkey River, in high ridge between river and pine land, March 7, 1942, *Percy H. Gentle 3944* (type in the University of Michigan Herbarium), small tree, leaves white on underside, flowers white, berries green.

The species is related to *S. salviifolium* Lam.

Solanum mayanum Lundell, sp. nov.—Frutex parce aculeatus; ramulis stellato-tomentosis. Folia longe petiolata, petiolo ad 5.5 cm. longo, lamina sinuato-lobata, membranacea, elliptica vel ovato-elliptica, 8–15 cm. longa, 3.5–10 cm. lata, apice acuta vel acuminata, basi rotundata et abrupte acuta, supra stellato-hirtella, subtus stellato-pilosa. Inflorescentiae extra-axillares, cymosae, stellato-tomentosae, pedunculatae. Pedicelli fructiferi ad 1.8 cm. longi. Calyx stellato-tomentosus, 5 mm. longus, ad medium 5-lobus. Corolla alba, fere 1.3 cm. longa, fere ad basin 5-loba. Antherae 6–7 mm. longae. Bacca globosa, glabra.

A shrub; branches armed with prickles up to 5 mm. long;

branchlets slender, sparsely aculeate with prickles about 2 mm. long, gray tomentose with appressed stellate hairs. Leaves alternate; petioles slender, sometimes armed, gray tomentose, canaliculate, up to 5.5 cm. long. Leaf blades membranaceous, elliptic or ovate-elliptic, 8 to 15 cm. long, 3.5 to 10 cm. wide, apex acute or short acuminate, base rounded and acute, the sides often unequal, margin sinuate-lobate or sinuate-dentate, usually with two or three shallow lobes on each side, sometimes entire or subentire, green and sparsely stellate-hirtellous above, paler and stellate-pilose beneath, the hairs with a short central ray. Inflorescence cymose, extra-axillary, up to 4.5 cm. long, gray tomentose with stellate hairs. Pedicels of flowers slender, up to 1.3 cm. long, thickened above and up to 1.8 cm. long in fruit. Calyx thinly stellate-tomentose, 5 mm. long, 5-lobed to the middle, the lobes ovate-triangular, apiculate, not accrescent. Corolla white, about 1.3 cm. long, thinly stellate-tomentose outside, 5-lobed almost to the base, the lobes lanceolate, attenuate. Anthers attenuate, 6 to 7 mm. long. Ovary very inconspicuously stipitate-glandular, essentially glabrous. Fruits globose, glabrous.

BRITISH HONDURAS: Toledo District, near Cowpen, Swasey Branch, Monkey River, in broken ridge, March 16, 1942, *Percy H. Gentle 3976* (type in the University of Michigan Herbarium), vernacular name, *broken ridge sosumbra*.

S. mayanum has affinity to *S. Hoffmannii* Bitter of Costa Rica.

LEUCOPHYLLUM FRUTESCENS (Berl.) Johnston f. **albineum** Lundell, f. nov.—A forma typica corolla albo-recedit.

TEXAS: Cameron County, about 8 miles west of Boca Chica, in scrub on low ridge, March 12, 1942, *C. L. Lundell and Amelia A. Lundell 10699* (type in the University of Michigan Herbarium, duplicate in the herbarium of Southern Methodist University), a shrub, 4 feet high, flower buds yellowish, corolla white.

This rare albino form is well worthy of attention by horticulturists. In typical *L. frutescens* the corollas are rose-pink and maculate in throat.

Belicea Lundell, gen. nov. *Rubiacearum*.—Frutex. Stipulae persistentes, abrupte cuspidatae. Folia longe petiolata, magna,

membranacea. Inflorescentiae capitatae, axillares, fasciculatae, brevissime pedunculatae, floribus sessilibus. Calyx cum hypanthio ca. 1.5 mm. longus, subtruncatus, minute 5-denticulatus. Corolla subtubulata, parva, lobis valvatis. Stamina 5. Antherae semiexsertae. Ovarium 4-loculare, loculis uniovulatis. Capitula fructifera paucicarpellata, mammosa.

Type species, *Belicea hoffmannioides* Lundell.

The genus, referable to the tribe Morindeae, is nearest *Morinda*. It differs from that genus primarily in having fruits which cohere at base only to form a mammosa head. The fruits of *Belicea* superficially resemble those of *Castilla elastica* Cerv. In *Morinda* the fruit is a fleshy globose syncarp.

In Mexico and Central America, British Honduras is known as Belice, the name which the genus commemorates.

Belicea hoffmannioides Lundell, sp. nov.—Frutex. Stipulae abrupte cuspidatae, ad 4 mm. longae. Folia longe petiolata, membranacea, elliptica vel obovato-elliptica, 11–26 cm. longa, 3–11 cm. lata, apice subabrupte acuminata, basi attenuata. Inflorescentiae pauciflorae. Flores albi. Corolla puberula, 7 mm. longa. Filamenta parce pilosa. Capitula fructifera ad 1.5 cm. diam.

A shrub; branchlets rather stout, densely puberulent, drying black. Stipules puberulent, persistent, ovate-triangular or suborbicular, abruptly cuspidate, up to 4 mm. long. Petioles slender, canaliculate, minutely puberulent, 2 to 3.5 cm. long, slightly winged above by the decurrent blade. Leaf blades membranaceous, elliptic or obovate-elliptic, 11 to 26 cm. long, 3 to 11 cm. wide, apex subabruptly acuminate, base attenuate, decurrent, the margin undulate, costa and veins minutely puberulent on under-surface, glabrous otherwise, costa nearly plane above, prominent beneath, primary veins 9 to 12 on each side, anastomosing near the margin. Flowers capitate, sessile, white; heads borne on short peduncles fasciculate in the leaf axils; subtending bracts, peduncles, calyx, and corolla puberulent. Calyx, including hypanthium, about 1.5 mm. long, subtruncate, the 5 teeth minute. Corolla 7 mm. long, including lobes about 2 mm. long, the tube pubescent within throat, the lobes valvate, triangular-ovate, acutish.

Stamens 5; filaments inserted at middle of tube, about 1.8 mm. long, sparsely pilose; anthers versatile, attached below middle, linear-oblong, about 1.8 mm. long, apical part exerted from tube. Ovary 4-celled, with a solitary ovule in each cell attached near base of septum; style included, puberulent; stigma bilobed. Fruits coherent at base only, depressed apically, containing 2 to 4 flat pyrenes 4.5 to 6 mm. long; the heads mammoses, up to 1.5 cm. in diameter, borne on peduncles less than 5 mm. long.

BRITISH HONDURAS: Toledo District, Swasey Branch, Monkey River, near the falls, in high ridge, March 7, 1942, *Percy H. Gentle 3945* (type in the University of Michigan Herbarium).

In habit and leaf form the species suggests *Hoffmannia*.